CLAIMS

1. A method for treating a subject afflicted with Transmissible Spongiform Encephalopathies (TSEs) comprising administering to the subject an effective amount of creatine, creatine phosphate or a creatine compound or a salt thereof, such that said subject is treated for said TSE.

2. The method of claim 1 wherein the subject is a mammal.

3. The method of claim 2 wherein the subject is a human.

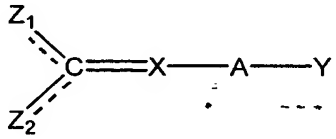
4. The method of claim 2 wherein the subject is cattle.

5. The method of claim 1 wherein said TSEs is scrapie.

6. The method of claim 1 wherein said TSEs is Bovine Spongiform Encephalopathy (BSE).

7. The method of claim 1 wherein said TSE is Creutzfeldt-Jakob disease (CJD).

8. A method for prevention or treatment of a subject afflicted with TSE comprising administering an effective amount of a creatine compound to said subject such that the subject is treated for TSE, wherein said creatine compound is of the general formula:



and pharmaceutically acceptable salts thereof, wherein:

a) Y is selected from the group consisting of: $-CO_2H$, -NHOH, $-NO_2$, $-SO_3H$, $-C(=O)NHSO_2J$ and $-P(=O)(OH)(OJ)$, wherein J is selected from the group consisting of: hydrogen, C_1-C_6 straight chain alkyl, C_3-C_6 branched alkyl, C_2-C_6 alkenyl, C_3-C_6 branched alkenyl, and aryl;

b) A is selected from the group consisting of: C, CH, C_1-C_5alkyl, C_2-C_5alkenyl, C_2-C_5alkynyl, and C_1-C_5 alkoyl chain, each having 0-2 substituents which are selected independently from the group consisting of:

1) K, where K is selected from the group consisting of: C_1-C_6 straight alkyl, C_2-C_6 straight alkenyl, C_1-C_6 straight alkoyl, C_3-C_6 branched alkyl, C_3-C_6 branched alkenyl, and C_4-C_6 branched alkoyl, K having 0-2 substituents independently selected from the group consisting of: bromo, chloro, epoxy and acetoxy;

2) an aryl group selected from the group consisting of: a 1-2 ring carbocycle and a 1-2 ring heterocycle, wherein the aryl group contains 0-2 substituents independently selected from the group consisting of: -CH_2L and -$COCH_2$L where L is independently selected from the group consisting of: bromo, chloro, epoxy and acetoxy; and

3) -NH-M, wherein M is selected from the group consisting of: hydrogen, C_1-C_4 alkyl, C_2-C_4 alkenyl, C_1-C_4 alkoyl, C_3-C_4 branched alkyl, C_3-C_4 branched alkenyl, and C_4 branched alkoyl;

c) X is selected from the group consisting of NR_1, CHR_1, CR_1, O and S, wherein R_1 is selected from the group consisting of:

1) hydrogen;

2) K where K is selected from the group consisting of: C_1-C_6 straight alkyl, C_2-C_6 straight alkenyl, C_1-C_6 straight alkoyl, C_3-C_6 branched alkyl, C_3-C_6 branched alkenyl, and C_4-C_6 branched alkoyl, K having O-2 substituents independently selected from the group consisting of: bromo, chloro, epoxy and acetoxy;

3) an aryl group selected from the group consisting of a 1-2 ring carbocycle and a 1-2 ring heterocycle, wherein the aryl group contains 0-2 substituents independently selected from the group consisting of: -CH_2L and -$COCH_2$L where L is independently selected from the group consisting of: bromo, chloro, epoxy and acetoxy;

4) a C_5-C_9 a-amino-w-methyl-w-adenosylcarboxylic acid attached via the w-methyl carbon;

5) a C_5-C_9 a-amino-w-aza-w-methyl-w-adenosylcarboxylic acid attached via the w-methyl carbon; and

6) a C_5-C_9 a-amino-w-thia-w-methyl-w-adenosylcarboxylic acid attached via the w-methyl carbon;

d) Z_1 and Z_2 are chosen independently from the group consisting of: =O, $-NHR_2$, $-CH_2R_2$, $-NR_2OH$; wherein Z_1 and Z_2 may not both be =O and wherein R_2 is selected from the group consisting of:

1) hydrogen;

2) K, where K is selected from the group consisting of: C_1-C_6 straight alkyl; C_2-C_6 straight alkenyl, C_1-C_6 straight alkoyl, C_3-C_6 branched alkyl, C_3-C_6 branched alkenyl, and C_4-C_6 branched alkoyl, K having O-2 substituents independently selected from the group consisting of: bromo, chloro, epoxy and acetoxy;

3) an aryl group selected from the group consisting of a 1-2 ring carbocycle and a 1-2 ring heterocycle, wherein the aryl group contains 0-2 substituents independently selected from the group consisting of: $-CH_2L$ and $-COCH_2L$ where L is independently selected from the group consisting of: bromo, chloro, epoxy and acetoxy;

4) a C_4-C_8 a-amino-carboxylic acid attached via the w-carbon;

5) B, wherein B is selected from the group consisting of: $-CO_2H$, -NHOH, $-SO_3H$, $-NO_2$, OP(=O)(OH)(OJ) and -P(=O)(OH)(OJ), wherein J is selected from the group consisting of: hydrogen, C_1-C_6 straight alkyl, C_3-C_6 branched alkyl, C_2-C_6 alkenyl, C_3-C_6 branched alkenyl, and aryl, wherein B is optionally connected to the nitrogen via a linker selected from the group consisting of: C_1-C_2 alkyl, C_2 alkenyl, and C_1-C_2 alkoyl;

6) -D-E, wherein D is selected from the group consisting of: C_1-C_3 straight alkyl, C_3 branched alkyl, C_2-C_3 straight alkenyl, C_3 branched alkenyl, C_1-C_3 straight alkoyl, aryl and aroyl; and E is selected from the group consisting of: $-(PO_3)_nNMP$, where n is 0-2 and NMP is ribonucleotide monophosphate connected via the 5'-phosphate, 3'-phosphate or the aromatic ring of the base; $-[P(=O)(OCH_3)(O)]_m$-Q, where m is 0-3 and Q is a ribonucleoside connected via the ribose or the aromatic ring of the base; $-[P(=O)(OH)(CH_2)]_m$-Q, where m is 0-3 and Q is a ribonucleoside connected via the ribose or

the aromatic ring of the base; and an aryl group containing 0-3 substituents chosen independently from the group consisting of: Cl, Br, epoxy, acetoxy, -OG, -C(=O)G, and -CO_2G, where G is independently selected from the group consisting of: C_1-C_6 straight alkyl, C_2-C_6 straight alkenyl, C_1-C_6 straight alkoyl, C_3-C_6 branched alkyl, C_3-C_6 branched alkenyl, C_4-C_6 branched alkoyl, wherein E may be attached to any point to D, and if D is alkyl or alkenyl, D may be connected at either or both ends by an amide linkage; and

7) -E, wherein E is selected from the group consisting of -$(PO_3)_n$NMP, where n is 0-2 and NMP is a ribonucleotide monophosphate connected via the 5'-phosphate, 3'-phosphate or the aromatic ring of the base; -$[P(=O)(OCH_3)(O)]_m$-Q, where m is 0-3 and Q is a ribonucleoside connected via the ribose or the aromatic ring of the base; -$[P(=O)(OH)(CH_2)]_m$-Q, where m is 0-3 and Q is a ribonucleoside connected via the ribose or the aromatic ring of the base; and an aryl group containing 0-3 substituents chose independently from the group consisting of: Cl, Br, epoxy, acetoxy, -OG, -C(=O)G, and -CO_2G, where G is independently selected from the group consisting of: C_1-C_6 straight alkyl, C_2-C_6 straight alkenyl, C_1-C_6 straight alkoyl, C_3-C_6 branched alkyl, C_3-C_6 branched alkenyl, C_4-C_6 branched alkoyl; and if E is aryl, E may be connected by an amide linkage;

e) if R_1 and at least one R_2 group are present, R_1 may be connected by a single or double bond to an R_2 group to form a cycle of 5 to 7 members;

f) if two R_2 groups are present, they may be connected by a single or a double bond to form a cycle of 4 to 7 members; and

g) if R_1 is present and Z_1 or Z_2 is selected from the group consisting of -NHR_2, -CH_2R_2 and -NR_2OH, then R_1 may be connected by a single or double bond to the carbon or nitrogen of either Z_1 or Z_2 to form a cycle of 4 to 7 members.

9. The method of claim 8, wherein said subject is cattle.

10. The method of claim 8, wherein said subject is human.

11. The method of claim 8 wherein the treatment comprises reducing or eliminating symptoms associated with a preexisting TSEs disease of the nervous system within the subject.

12. The method of claim 8 wherein the treatment comprises preventing the occurrence of TSEs diseases of the nervous system within the subject.

13. The method of claim 8 wherein the creatine compound is creatine in salt and hydrated forms.

14. The method of claim 8 wherein the creatine compound is creatine phosphate.

15. The method of claim 8 wherein the creatine compound is cyclocreatine.

16. The method of claim 8 wherein the creatine compound is cyclocreatine phosphate.

17. The method of claim 8 wherein the creatine compound is homocyclocreatine.

18. The method of claim 8 wherein the creatine compound is 3-guanidinopropionic acid.

19. The method of claim 8 wherein the creatine compound is guanidinoacetate.

20. The method of claim 8 wherein the creatine compound is creatine-pyruvate or creatine ascorbate.

21. The method of claim 8 further comprising coadministering to the subject an effective amount of an approved drug for the treatment of diseases of the nervous system.

22. The method of claim 8 further comprising coadministering to the subject an effective amount of a supplement that protects cells of the nervous system.

23. The method of claim 22, wherein said supplement is selected from the group consisting of vitamins, antioxidants, and energy enhancing agents.

24. The method of claim 8, wherein said creatine compound is administered orally.

25. The method of claim 8, wherein said creatine compound is administered as a food supplement.

26. The method of claim 8, wherein said effective amount is effective to prevent TSEs diseases.

27. The method of claim 25 wherein the creatine compound is creatine-pyruvate or creatine- ascorbate.

28. A method of claim 25 wherein the creatine compound is a guanidino benzoate.

29. A dietary supplement for the treatment or prevention of TSEs in a subject comprising an effective amount of a creatine, creatine phosphate, or a creatine compound or a salt thereof to treat or prevent TSEs in said subject.

30. The dietary supplement of claim 29, wherein said subject is cattle.

31. The dietary supplement of claim 29, wherein said TSE is BSE.

32. The dietary supplement of claim 29, wherein said dietary supplment comprises creatine.

33. The dietary supplement of claim 29, wherein the creatine compound is creatine phosphate.

34. The dietary supplement of claim 29, wherein the creatine compound is cyclocreatine.

35. The dietary supplement of claim 29, wherein the creatine compound is cyclocreatine phosphate.

36. The dietary supplement of claim 29, wherein the creatine compound is homocyclocreatine.

37. The dietary supplement of claim 29, wherein the creatine compound is 3-guanidinopropionic acid.

38. The dietary supplement of claim 29, wherein the creatine compound is guanidinoacetate.

39. The dietary supplement of claim 29, wherein the creatine compound is creatine-pyruvate or creatine ascorbate.